United States
Environmental Protection
Agency

EPA Responds to Community's Questions

Lammers Barrel Superfund Site
Beavercreek, Ohio April 2010

U.S. Environmental Protection Agency prepared this fact sheet in response to questions raised during community interviews conducted in October 2009. The interviews were done as part of the Agency's ongoing efforts to inform and engage local residents throughout the investigation and cleanup activities for the Lammers Barrel Superfund site. Questions asked by residents and local officials fall into four main categories presented below – Site History and Ownership, Extent of Contamination, Cleanup Activities and Next Steps.

In addition to this fact sheet, EPA is preparing a revised community involvement plan that will include a summary of concerns raised during the interviews, as well as EPA's plans for addressing the concerns and involving residents in key decisions as site activities progress. The revised CIP will be placed in the information repository (see box, left).

Site history and ownership

Q: Who owns the Lammers Barrel site?

A: The 2-acre parcel of land is now vacant and was purchased by a local resident after the fire.

Q: How much of the contamination at the site was present before the September 1969 fire? How much resulted from the fire?

A: Any contamination at the site prior to the 1969 fire is unknown because no previous environmental investigations had been conducted. When the Lammers Barrel facility burned to the ground in September 1969, chemicals at the site moved into the soil and ground water (underground supplies of fresh water). Any prior inventories of chemicals handled at the facility were reportedly destroyed in the fire.

Q: What happened to the debris and barrels at the site after the 1969 fire?

A: Most of the storage equipment and containers (barrels) were destroyed during the fire. Debris from the fire was reportedly disposed of in a private gravel pit about a half mile south of the site.

Q: The fire happened in 1969. Why has it taken 40 years for EPA to clean up the site?

For more information

EPA documents regarding the Lammers Barrel site are available in the information repository located at Beavercreek Community Library, 3618 Dayton-Xenia Road.

You can also visit the Web site: www.epa.gov/region5/sites/lammers

You may also contact:

Ginny Narsete
Community Involvement Coordinator
EPA Region 5, Superfund Division
77 W. Jackson Blvd (SI-7J)
Chicago, IL 60604-3590
312-886-4359
narsete.virginia@epa.gov

Tim Fischer
Remedial Project Manager
EPA Region 5, Superfund Division
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604-3590
312-886-5787
fischer.timothy@epa.gov

Call Region 5 toll-free, 800-621-8431, weekdays, 9:30 a.m. to 5:30 p.m.

Scott Glum
Site Coordinator
Ohio EPA, Southwest District Office
401 E. Fifth St.
Dayton, OH 45402
937-285-6065
scott.glum@epa.state.oh.us

A: The potential effects of chemicals released from the Lammers Barrel site were not discovered until October 1985 when residential wells along East Patterson Road were sampled and reported to contain volatile organic compounds (VOCs). These findings prompted the state of Ohio and EPA to hook up affected residences to the county water supply. Additional environmental investigations were conducted in 1992, 1997, 2000, 2001 and 2003 to determine the extent of VOC contamination near the site.

Q: What is the Superfund process?

A: Superfund is the name of the program established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), which allows EPA to investigate and clean up hazardous waste sites using federal dollars. EPA also has authority to compel responsible parties to perform cleanups or reimburse the government for cleanups led by EPA. In 2002, EPA proposed that the Lammers Barrel site be added to the Superfund's "National Priorities List," a roster of the nation's most hazardous waste areas. EPA's Office of Solid Waste and Emergency Response in Washington, D.C., oversees the Superfund program.

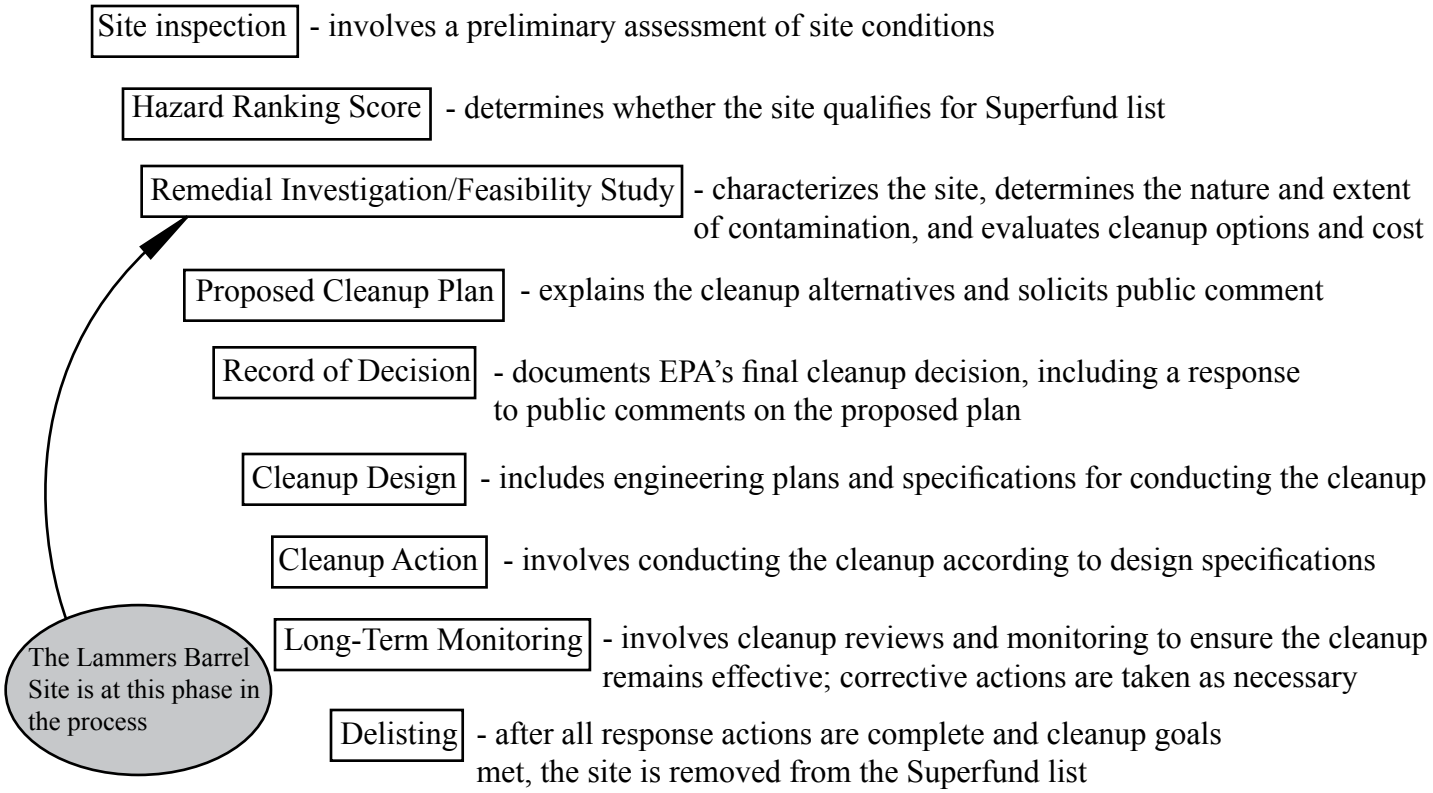
Q: Who is involved in investigating and cleaning up the site?

A: In 2002, EPA began overseeing a long-term remedial investigation (RI) to determine whether chemicals at the site pose any risk to people or the environment. The study represented a joint effort by 41 responsible parties who agreed to conduct and fund the RI and evaluate site cleanup options.

Q: Where is testing (or sampling) being done?

A: Under EPA supervision, the RI involved installing 39 ground water monitoring wells, sampling 57 private residential wells and collecting 29 soil samples. Surface water and sediment (mud) samples were also collected from five locations along Little Beaver Creek.

The Superfund Process



The Lammers Barrel site sits on a 2-acre vacant lot in a predominantly industrial area.

Extent of contamination

Q: How bad and how large is the contaminated ground water plume? In what direction and how fast is it moving? What is the impact of the plume on Beaver Creek?

A: A plume is a mass of contaminated underground water. Site-related chemicals found in the ground water plume associated with the site include the man-made VOCs trichloroethylene (TCE), vinyl chloride (VC), and 1,2 dichloroethene (DCE). The highest levels of TCE and 1,2-DCE occur nearest the site and along the north side of East Patterson Road; and low levels of TCE occur farther to the south and east in the Woodhaven subdivision (Rosendale, Kenora Circle, Stanwick, and Tralee Trail). In addition, VC was found in monitoring wells on the north side of East Patterson Road about a half-mile east of the site. Based on the investigations to date, the ground water plume is moving due east from the site at a rate of about 300 feet per year, and Beaver Creek has been unaffected by site contaminants.

Q: Why were some residents connected to the county public water supply while others were not?

A: Monitoring since 1992 has confirmed the presence of VOCs in ground water along East Patterson Road and under portions of the Woodhaven Subdivision. To date, VOC contamination at levels above those considered to be safe for public drinking water systems has been found in 19 residential wells. All of these homes have been connected to the county public water supply. Many residential wells in subdivisions southeast of the site have been unaffected by site contaminants. These residents were not hooked up to public drinking water systems.

Q: Do VOCs travel in ground water or evaporate into the air?

A: VOCs are emitted as gases from certain solids or liquids. They can move in soil, ground water and air. They can also vaporize into the air "pockets" within the soil and potentially travel upward as soil gas into residential basements. Once in the basements, contaminants may be distributed throughout the home and into the air breathed by residents. This process is called vapor intrusion. Based on the site investigation results to date, vapor intrusion is not considered to be a pathway of concern for off-site residences. EPA may, however, require on-site vapor barrier construction restrictions as part of the cleanup plan.

Q: Have ground water samples collected at the site been tested for the VOC 1,4-dioxane?

A: No. EPA considers 1,4-dioxane an "emerging contaminant" and will evaluate the need for sampling this substance moving forward.

Q: Does the site pose any risks to animals and wildlife in the area?

A: There is no indication that site contaminants pose any risk to area wildlife.

Cleanup activities

Q: What's being done to clean up the site and stop the contamination from seeping into the ground water?

A: A feasibility study (FS) is under way to identify and evaluate cleanup options under various future land use scenarios (for example, how effective would a particular cleanup option be if the property were used commercially versus recreationally in the future?). After the FS is complete, EPA will propose a cleanup plan, ask for public input and select a final cleanup plan.

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Chicago, IL 60604-3590

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Q: Who will pay for the cleanup? Will taxpayer money be used?
A: A group of 41 parties have agreed to fund the site investigation and feasibility study. Once a cleanup plan is selected, EPA will undertake negotiations to determine how the cleanup will be funded.

Q: What were the results of the "natural attenuation evaluation" report conducted by the potentially responsible parties?
A: Natural attenuation is the scientific term for letting natural processes such as dilution, decay and evaporation lower pollutant concentrations. The Natural Attenuation Evaluation report drafted by the PRP group concluded that Monitored Natural Attenuation is a potentially viable remedy for off-site ground water in the future. EPA has determined, however, that additional information is required before MNA can be selected as a remedy for the Lammers Barrel site. For this reason, an on-site remedy for the Lammers Barrel site may proceed before a remedy is selected for off-site ground water.

Next steps

Q: How will the property be used after the cleanup?
A: Future use has not yet been determined. After the cleanup, there will likely be restrictions regarding how the property can be used (for example, the site may be restricted to industrial/commercial or recreational uses). Whoever owns the property at that point would decide how they want to use it, within the established legal limitations.

Q: Are there any other sites close to the Lammers Barrel site that may continue to pose a contamination problem after the site is cleaned up?
A: Historical sampling data from residential wells in the area suggest that two ground water plumes may be impacting local wells (one from the Lammers Barrel site, extending eastward along East Patterson Road, and another, from an unknown source, extending southwest to northeast across the northwest corner of the Woodhaven subdivision). Further investigation will be conducted to determine the extent of both plumes and ensure that residential wells are protected.